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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,020	06/07/2005	Werner Berger	00266P0009WOUS	8805
30008 7590 10/03/2007 GUDRUN E. HUCKETT DRAUDT SCHUBERTSTR. 15A WUPPERTAL, 42289 GERMANY			EXAMINER CHEN, VIVIAN	
			ART UNIT 1773	PAPER NUMBER
			MAIL DATE 10/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,020	Applicant(s) BERGER ET AL.	
	Examiner Vivian Chen	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-23 have been cancelled by Applicant.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 24-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over:

WNUK ET AL (US 5,391,423),

in view of BASTIOLI ET AL (US 5,512,378).

WNUK ET AL '423 discloses a biodegradable laminate comprising a core or base layer comprising a moisture sensitive polymer (e.g., starch) and at least one moisture resistant polymer (e.g., aliphatic copolyesters, polylactide resins, aromatic/aliphatic copolyesters, etc.) on at least one surface of the core or base layer. The films have a typical thickness of 12-75 microns, with the base or core layer comprising 30-80% of the total film thickness. A typical aromatic/aliphatic copolyester comprises ethylene terephthalate and ethylene adipate units. The laminates are formed by conventional coextrusion and/or blown film processes. (entire document, e.g., line 25-27, col. 5; line 45, col. 6 to line 30, col. 7; column 10; line 1, col. 11;

Art Unit: 1773

column 14; line 55, col. 16 to line 11, col. 17; line 40, col. 22 to line 31, col. 24; etc.) However, the reference does not explicitly disclose the recited water content.

BASTIOLI ET AL '378 discloses that it is well known in the art to use starch-based compositions in film laminates, wherein the starch-based compositions preferably contain 5-25 wt% water, up to 90 wt% synthetic polymers, plasticizers (e.g., glycerine, etc.) and other additives, in order to form useful water-resistant biodegradable articles. The synthetic polymers comprises polyesters (e.g., polylactides, etc.) and copolymers of polyvinyl acetate and ethylene-vinyl alcohol produced by hydrolysis of the ethylene vinyl acetate units, and mixtures thereof. (lines 60, col. 2 to line 33, col. 4)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known starch-based compositions as disclosed in BASTIOLI ET AL '378 as the starch layer in the laminates of WNUK ET AL '423 in order to form useful biodegradable moisture resistant multilayer articles. One of ordinary skill in the art would have used known hydrolyzed polyvinyl acetate copolymers (claims 27-28) in the starch composition depending on the compatibility and mechanical or chemical properties desired for specific applications. It is well known in the art to that for optimum coextrusion, the melt viscosities of the individual layers should be substantially comparable (claim 37) in order to facilitate formation of uniform, defect-free layers. One of ordinary skill in ordinary skill in the art would have selected the rheological properties of the layer materials (claim 38-39) in order to obtain the optimum physical properties for specific applications and to facilitate melt processing, since the MFI is typically a function of the molecular weight of polymers which in turn strongly affects the physical properties (e.g., tensile strength, flexibility, etc.) of the polymer. One of ordinary

Art Unit: 1773

skill in the art would be readily capable of determining suitable film-forming parameters (e.g., melt temperature of the various layers, blow ratios, line speeds, orientation temperatures, etc.) (claim 40-42, 44, 46-47) based on the specific thermal and rheological properties of the particular components of individual layers.

3. Claims 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over:

WNUK ET AL (US 5,391,423), in view of BASTIOLI ET AL (US 5,512,378),

as applied to claim 37 above,

and further in view of ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY (ULLMANN'S).

ULLMANN'S discloses that it is well known in the art to incorporate a stretching step in blown film processes in order to produce oriented films with improved mechanical and other physical properties. (sections 2.2.2 and 2.3.2)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a stretching step in the blown film process for the films of WNUK ET AL '423 in order to further enhance the mechanical properties of the resultant films. One of ordinary skill in the art would be readily capable of determining suitable orientation parameters (e.g., line speeds, orientation speeds and temperatures, etc.) (claim 40-42, 44, 46-47) based on the specific thermal and rheological properties of the particular components of individual layers.

Art Unit: 1773

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 28, 2007



Vivian Chen
Primary Examiner
Art Unit 1773